

# **Graphing Modes of Transportation**

## **Mathematics Performance Event Grades 3-5**

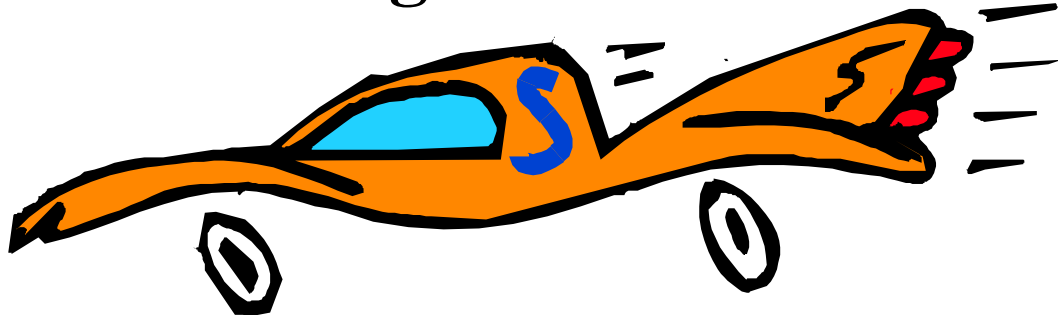
**by**

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# Graphing Modes of Transportation

**Purpose:** The purpose of this activity is to assess a student's ability to organize information into a graph. The student must construct two bar graphs, one to show the number of students who have ridden on each of the various types of transportation and the other to show the categories of transportation types.

## **Show-Me Standards Addressed:**

Knowledge: Ma 6

Performance: 1.8, 3.5

**Grade Level Range:** 3-5

**Subject Area:** Mathematics

**Time Needed for Event:** 30 minutes

**Materials Needed:** Student Event Packet, pencil, crayons, markers

**Instructions for Administration:** Present students with the Student Prompt and make sure he/she clearly understands what is expected. Go over the scoring guide to ensure the student knows what is meant by quality.

## **Pre-Assessment Instructions:**

Prior to the assessment the student must know how to construct a bar graph.

## **Graphing Modes of Transportation Student Prompt**

Recently a class of fourth grade students responded to a survey entitled “Modes of Transportation.” Examine the results below and use the Graph Sheets to construct two graphs.

Survey Results:

Car 12	Bus 12
Sailboat 6	Helicopter 0
Plane 8	Bike 12
Train 9	Canoe 9

Graph 1:

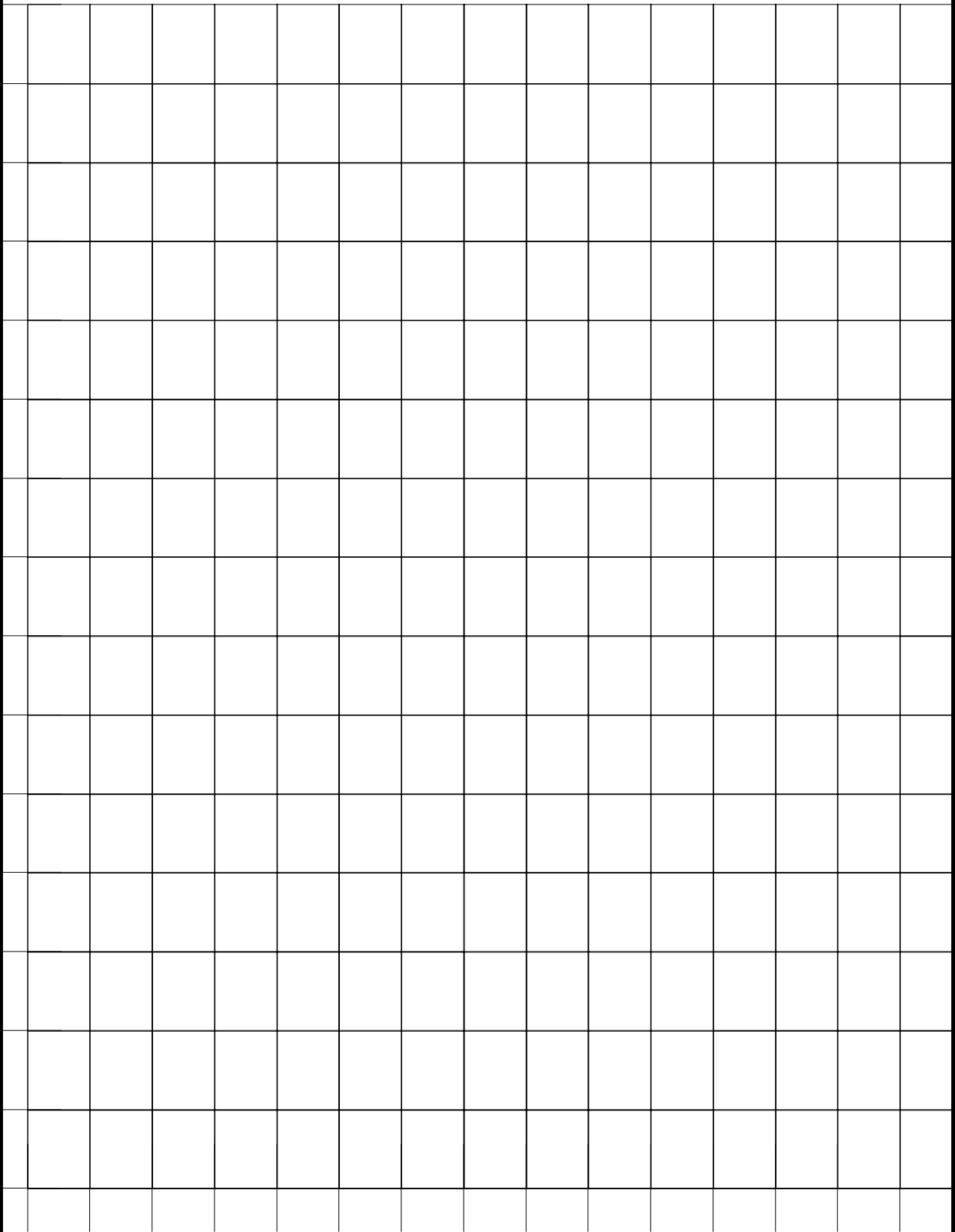
Construct a bar graph to show the number of students who have ridden on each type of transportation.

Graph 2:

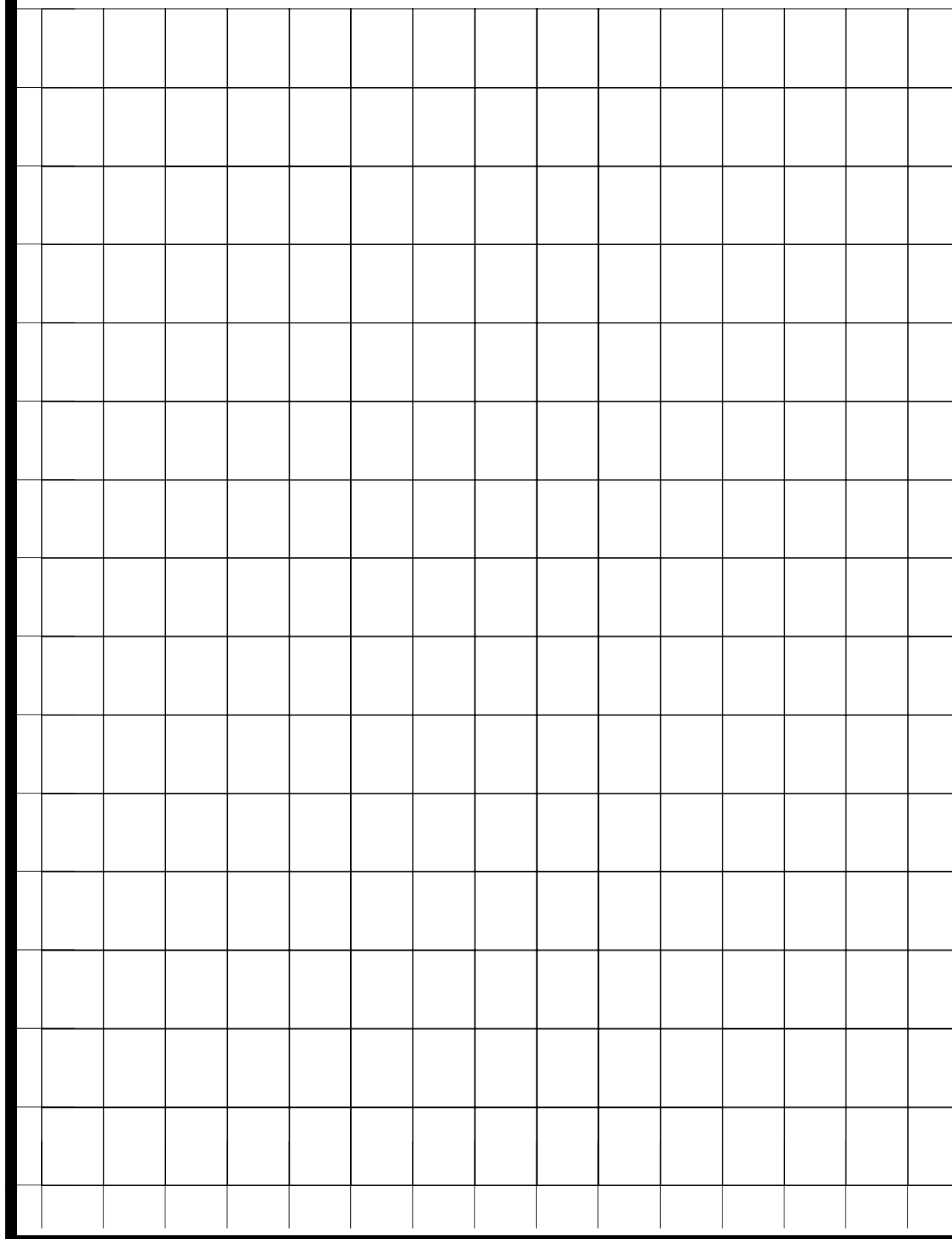
Arrange the vehicles into three categories: land, water, and air. Construct a bar graph to show the number of vehicles in each of the three categories.

**Be sure to give your graphs titles and labels for both axes.**

# Graph 1



# Graph 2



## Scoring Guide for Graph #1

- 4 The student's graph is correct and clearly communicates the findings. The graph clearly indicates how many students have ridden on each type of transportation. All of the necessary information is included on the graph. The graph is titled and has both axes correctly labeled. The graph is neat and easy to read. Knowledge of graphing is fully demonstrated.
- 3 The student's graph communicates the findings. The graph indicates how many students have ridden on each type of transportation with minor errors. Most of the necessary information is included on the graph. The graph is titled or has both axes correctly labeled. The graph can be understood. Knowledge of graphing is demonstrated.
- 2 The student's graph is unclear in communicating the findings. The graph attempts to indicate how many students have ridden on each type of transportation but contains critical errors. Much of the necessary information is not included on the graph. The graph may or may not be titled or have correctly labeled axes. The graph is difficult to understand. The response shows confusion or lack of understanding of the graphing process.
- 1 The student's graph fails to communicate the findings. The response shows no understanding of the graphing process.

## Scoring Guide for Graph #2

- 4 The student's graph is correct and clearly communicates the findings. The graph clearly shows the number of vehicles in each of the categories. All of the necessary information is included on the graph. The graph is titled and both axes are correctly labeled. The graph is neat and easy to read. Knowledge of graphing is fully demonstrated.
- 3 The student's graph communicates the findings. The graph shows the number of vehicles in each of the categories with minor errors. Most of the necessary information is included on the graph. The graph is titled or has both axes correctly labeled. The graph can be understood. Knowledge of graphing is demonstrated.
- 2 The student's graph is unclear in communicating the findings. The graph attempts to show how many vehicles are in each of the categories but contains critical errors. Much of the necessary information is not included on the graph. The graph may or may not be titled or have correctly labeled axes. The graph is difficult to understand. The response shows confusion or lack of understanding of the graphing process.
- 1 The student's graph fails to communicate the findings. The response shows no understanding of the graphing process.